

Question Bank for Industrial Electronics

SPPU In-Sem Exam 2023-24

SE (Automation and Robotics Engineering)

Unit 1: Factory & Process Automation

- Q.1 Define Automation. State the goals of automation?
- Q.2 Explain in brief types of Control Elements in Industrial Automation
- Q.3 Define Automation. State the selection criteria for the control elements in Industrial Automation
- Q.4 What are the advantages of Automation
- Q.5 Explain the types of automation in brief
- Q.6 Write a note on IEC 61131
- Q.7 State the need of PLC.
- Q.8 Explain evolution of PLC in brief
- Q.9 Draw and explain the ladder logic for following logic gates with timing diagram
- a) NAND Gate b) OR Gate c) AND Gate d) NOR Gate e) XOR Gate
- f) XNOR Gate g) NOT Gate
- Q.10 Draw and explain the ladder logic for following Boolean expression
- a) $A + B = Q$
- b) $A \cdot (B + C) = Q$
-

Unit 2: Programmable Logic Controllers

- Q.1 Define PLC? State the advantages of PLC
- Q.2 State advantages and disadvantages of PLC
- Q.3 With neat diagram explain the Architecture of PLC
- Q.4 Explain the types of PLC
- Q.5 Distinguish between Fixed PLC and Modular PLC
- Q.6 Explain Fixed Type of PLC. State its advantages and disadvantages
- Q.7 Explain Modular Type of PLC. State its advantages and disadvantages
- Q.8 Explain Distributed Type of PLC. State its advantages and disadvantages
- Q.9 Explain PLC Input Module
- Q.10 What is Scan Cycle? Explain the with neat diagram the stages involved in Scan Cycle of PLC
- Q.11 State and explain the selection criteria of PLC.